

Application Number 10/599134
Response to the Office Action dated August 14, 2008

REMARKS

Favorable reconsideration of this application is requested in view of the following remarks.

Claim 1 has been amended to include limitations of ratios of oxides in the dielectric layer on the display electrode and total content of ZnO and Bi₂O₃ as supported by the specification at page 6, lines 23-26, page 7, lines 4-7, and page 12, lines 3-22.

Claim 5 has been added as supported by claim 1 and examples 6, 9, 14, 18, 20, 22, and 24 in tables 1 and 2 of the specification at pages 19 and 20, respectively.

Claim 1 has been rejected under 35 U.S.C. 103(a) as being obvious over Mitsui et al. (U.S. Patent Application Publication No. 2003/0129546) in view of Mito et al. (U.S. Patent No. 6,589,894). Applicants respectfully traverse this rejection.

Claim 1 requires particular ratios of oxides such that ZnO / (SiO₂ + Al₂O₃) be at least 3, Bi₂O₃ / (B₂O₃ + ZnO) be more than 0 and no more than 5, and a total content of ZnO and Bi₂O₃ be 35 to 65 wt%. Mitsui discloses examples of glass powders A-D that contain oxides such as Bi₂O₃, SiO₂, B₂O₃, ZnO, and Al₂O₃ (see para. [0058] at page 5 and paras. [0105]-[0108] at page 8). Among these examples, however, only glass A contains a total content of ZnO and Bi₂O₃ within the range of 35 to 65 wt% (see *id.*; glass A contains 20 wt% each of ZnO and Bi₂O₃, glass B contains ZnO and Bi₂O₃ 18 wt% in total, glass C contains B₂O₃ 7.6% only, and glass D contains ZnO and Bi₂O₃ 75 wt% in total). However, ZnO / (SiO₂ + Al₂O₃) of glass A is 2 and is outside the required range of claim 1. By limiting the total amount of ZnO and Bi₂O₃ and the ratio of ZnO / (SiO₂ + Al₂O₃) to at least 3, the dielectric layer can provide a lower softening point and higher transmissivity and does not react with electrodes at 600 C° or lower (see page 12, lines 3-15 of the specification), and by limiting the ratio of Bi₂O₃ / (B₂O₃ + ZnO) between more than 0 and 0.5, the dielectric layer can provide a lower dielectric constant and reduce power consumption as shown in examples 3, 6-9, 11-12 in table 1 and examples 14-15,

Application Number 10/599134
Response to the Office Action dated August 14, 2008

19, 21, and 23 in table 2 (see table 1 at page 19, table 2 at page 20, and page 12, lines 16-22 of the specification). Accordingly, claim 1 is distinguished from Mitsui.

Mito discloses a glass composition for a plasma display panel (PDP) which contains 5-40 % BaO, 20-55 % ZnO, 15-50 % B₂O₃, and 0-25 % SiO₂ and suggests that the glass composition may further contain Al₂O₃, CaO, and other oxides (see coln. 1, lines 56-59 and coln. 2, line 65 – coln. 3, line 3). Mito, however, fails to disclose the particular content of Al₂O₃ and a glass composition including Bi₂O₃ (see coln. 4, table 1) and accordingly, fails to disclose the limitation of the total amount of ZnO and Bi₂O₃ and the ratios of ZnO / (SiO₂ + Al₂O₃) and Bi₂O₃ / (B₂O₃ + ZnO) as claim 1 requires. Accordingly, Mito does not remedy the deficiencies of Mitsui, and claim 1 is distinguished from Mitsui in view of Mito.

In addition, claim 5 includes a limitation of Bi₂O₃ content at 2-9.5 wt%. Mitsui discloses 10-85 wt% Bi₂O₃ content (see para. [0058] at page 5), and glass A-D of Mitsui contains 38 wt%, 62 wt%, 43.3 wt%, and 0 wt% of Bi₂O₃, respectively (see paras. [0105]-[0108] at page 8). Mito does not disclose a glass composition including Bi₂O₃ as discussed above. Thus, claim 5 also is distinguished from Mitsui in view of Mito.

Claims 2-4 have been rejected under 35 U.S.C. 103(a) as being obvious over Mitsui et al. (U.S. Patent Application Publication No. 2003/0129546) and Mito et al. (U.S. Patent No. 6,589,894) in view of Kosaka et al. (U.S. Patent No. 6,207,268). Applicants respectfully traverse this rejection.

Claims 2-4 are distinguished from Mitsui and Mito for at least the same reasons as discussed for claim 1 above. Kosaka discloses a transfer sheet of a PDP that may include Bi₂O₃, ZnO, SiO₂, B₂O₃, PbO₂, and Al₂O₃ (see for example, examples 1-5 at colns. 40-45) but fails to disclose content of each oxide Bi₂O₃, ZnO, SiO₂, B₂O₃, or PbO, the total content of ZnO and Bi₂O₃ and the ratios of ZnO / (SiO₂ + Al₂O₃) and Bi₂O₃ / (B₂O₃ + ZnO) as claim 1 and accordingly, claims 2-4 require. Thus, Kosaka does not remedy the deficiencies of Mitsui and Mito, and claims 2-4 are distinguished from Mitsui and Mito in view of Kosaka. Accordingly, this rejection should be withdrawn.

Application Number 10/599134
Response to the Office Action dated August 14, 2008

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.



Dated: November 13, 2008

DPM/my/ad

Respectfully submitted,

HAMRE, SCHUMANN, MUELLER &
LARSON, P.C.
P.O. Box 2902
Minneapolis, MN 55402-0902
(612) 455-3800

By: 

Douglas P. Mueller
Reg. No. 30,300